

F. R. ALLEN.
 STAMP AFFIXING MACHINE.
 APPLICATION FILED AUG. 15, 1910.

1,071,631.

Patented Aug. 26, 1913.

2 SHEETS—SHEET 1.

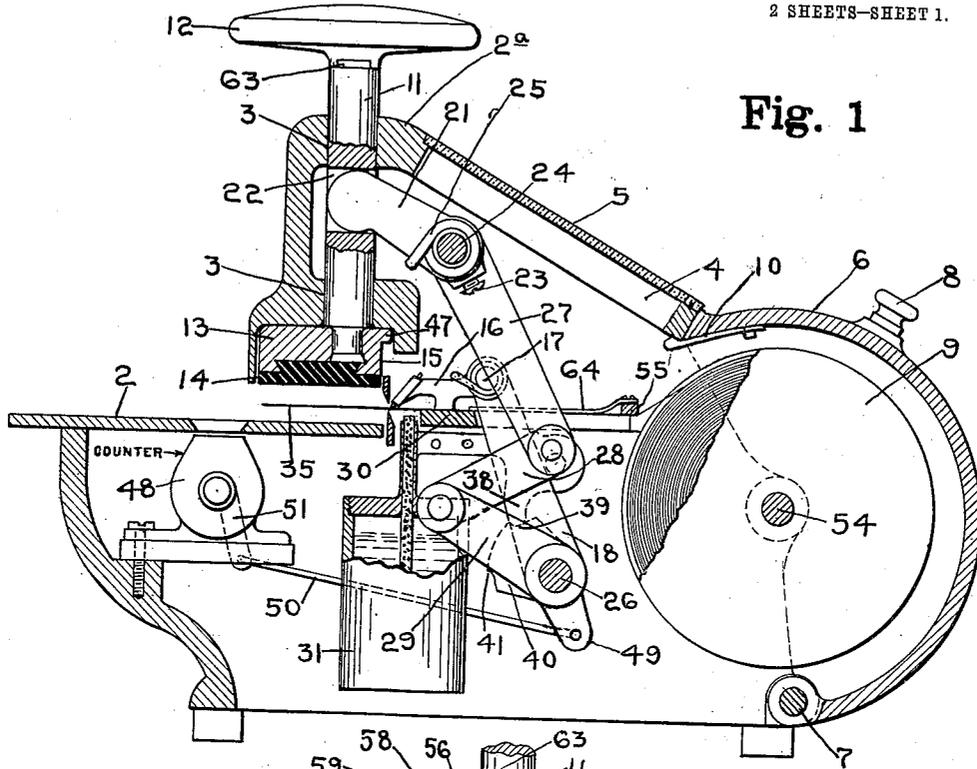


Fig. 1

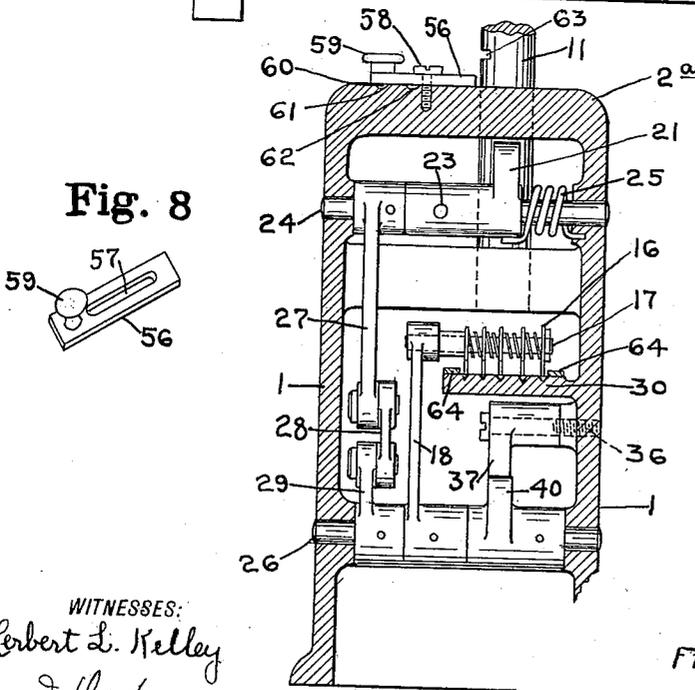


Fig. 2

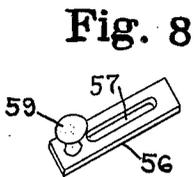


Fig. 8

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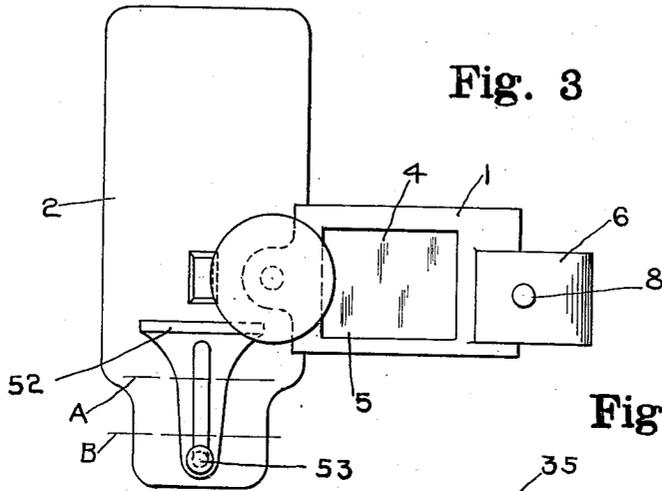


Fig. 3

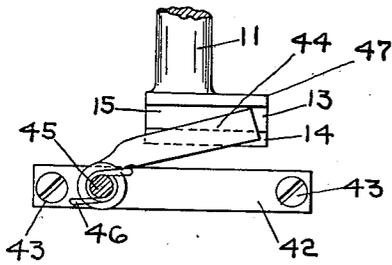


Fig. 5

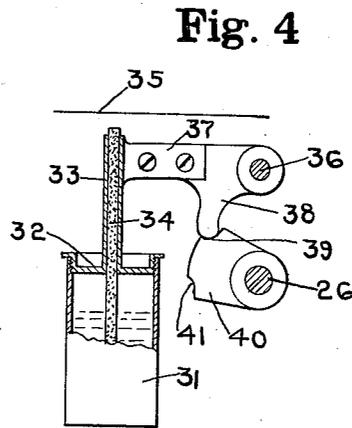


Fig. 4

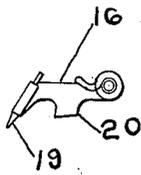


Fig. 7

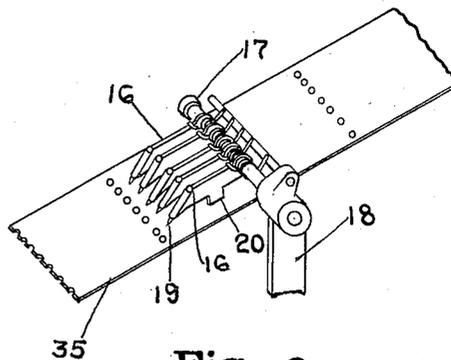


Fig. 6

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UNITED STATES PATENT OFFICE.

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STAMP-AFFIXING MACHINE.

1,071,631.

Specification of Letters Patent. Patented Aug. 26, 1913.

Application filed August 15, 1910. Serial No. 577, 231.

To all whom it may concern:

Be it known that I, FRED R. ALLEN, a citizen of the United States, residing at the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Stamp-Affixing Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention has reference to a stamp affixing machine, its object being to provide, in such a machine, a plurality of yieldable fingers adapted to engage and feed a strip of stamps, and also to provide the machine with an automatically operated moistening device, and with means for detaching one stamp at a time from the strip and affixing the stamp to the envelop.

A further object of the invention is to provide a water tight reservoir with a wick for applying moisture to the gummed surface of the stamp strip, and also for automatically removing the moistener from contact with said stamp strip at the end of each stroke of the feeding mechanism.

A further object of the invention is to provide simple and effective means for locking the actuating mechanism to prevent the strip from being fed forward and moistened until immediately before it is desired to affix the stamp to the envelop.

A further object of the invention is to provide a horizontal table over which a horizontally disposed strip of stamps is fed from the roll and to provide a transparent material above said table and stamps through which the condition of the strip and action of its operating mechanism may be clearly observed.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a sectional side elevation of my improved strip affixing machine. Fig. 2 is a sectional end elevation showing the frame in section to better see the operating mechanism, looking from the rear. Fig. 3 is a plan view of the affixer showing the table and guide for controlling the position of the envelop while

affixing the stamp thereto. Fig 4 is a detail illustrating the mechanism for operating the moistener. Fig 5 is a detail illustrating the shears for cutting the stamps the same being actuated by the downward stroke of the plunger. Fig. 6 is a detail illustrating the plurality of independently yieldable fingers engaging the perforations in the ribbon of stamps for the purpose of feeding the ribbon forward. Fig. 7 is a detail of one of the little fingers. Fig. 8 is a detail of the latch which is adapted to retain the mechanism in its inoperative position.

Referring to the drawings, 1-1 designates the two side frames of the machine on the forward portion of which is supported an envelop receiving table 2. The frames are built up above the table as at 2^a to provide room for the operating mechanism and also to provide at 3-3 bearings for the hand operated plunger hereinafter described.

An essential feature of the invention is that the stamps are fed from a reel over the face of a horizontal table and that the top of the casing is cut away at 4 and covered with a glass 5 so that the travel of the stamps and operation of the stamp feeding mechanism may be readily and at all times observed without removing any portion of the casing. The rear portion of the casing is provided with a semi-circular cover 6 hinged at its lower end 7, the same being adapted to be swung back, or opened by means of the knob 8 to receive the reel of stamps 9. A spring latch 10 is provided for securing the upper edge of this cover in its closed position.

The plunger 11 is here shown as being particularly adapted to be actuated or forced downward by the pressure of the hand of the operator upon the enlarged head 12 of the same, but any means may be employed for operating said plunger, and said means may be actuated either by hand or automatically. The foot of the plunger 13 is enlarged and provided on its face with a rubber pad 14 for engaging the stamp and pressing it onto the envelop. The rear edge of this plunger is cut away at 15 to receive and engage the upper arm of the shears hereinafter described, an overhanging lip 47 being formed whereby said shears are en-

gaged and closed to sever or detach one stamp from the strip by the downward movement of the plunger.

In machines of this character using strips of stamps made up into rolls it is found that owing to conditions under which the rolls are made up that the spaces between the perforations at the ends of the stamps are not absolutely uniform and therefore the usual means employed for feeding the strips is not accurate enough to insure the stamps being severed each time in the proper place. In order to correct this variation and effectually obviate this difficulty and feed the stamps positively to be cut each time at their proper place, I have provided a plurality of little independently spring pressed fingers 16 each pivotally mounted on the pin 17 carried by the arm 18, the opposite end of said arm being fixed to rock shaft 26, the engaging end of each finger being provided with a removable hardened pin point 19 adapted to enter one of the perforations in the strip and said points are preferably tipped or inclined backward to facilitate their ready withdrawal from said perforations upon their backward stroke. Each little finger 16 may also be provided with a foot 20 which will rest upon the face of the stamp and limit the depth to which the point shall enter the perforation or hole in the strip. In order that these fingers shall be carried back for another stamp when the plunger is forced downward and feed the stamp forward as the plunger returns on its upward stroke I have provided an arm 21, one end of which enters a slot 22 in the plunger, the opposite end of said arm being secured by a set screw 23 to the rock shaft 24, a coil spring 25 being adapted to act on said arm 21 to automatically carry said plunger back to its normal or raised position. Motion is then communicated from this shaft 24 to the said rock shaft 26 through the arm 27, link 28 and arm 29, and through said arm 18 the fingers 16 are moved back and forth over the horizontal stamp supporting table 30 and are operated in time with the stamp affixing plunger 11. In order to overcome the discrepancy between the perforations in the stamp strip I have made the arm 18 of sufficient length so that it will reciprocate the fingers a greater distance than the length of a stamp in order that the backward stroke will carry the fingers 16 some distance beyond the usual length of a stamp, see Fig. 6. Then when the fingers move forward they will slide along the face of the stamp strip until the points enter the perforations therein, thus positively engaging the strip and carrying the same forward the exact length of the end stamp which is to be applied, even if it varies considerably from the regulation length. Flat spring

fingers 64—64 are provided on either side of the strip to engage the side edges thereof to keep the strip in shape as it is being fed over the table 30.

In order to moisten the stamp as it is being fed forward I have provided a tank 31, see Fig. 4, into which a head 32 is threaded to make the same water-tight. To this head is secured a narrow neck portion 33 in which a wick 34 is held, the lower end of the wick communicating with the water in the tank through which the moisture is fed by capillary attraction to the upper end of the wick which engages the underside of the stamp strip 35 when the same is being fed along. This tank is suspended through its neck from the pivot pin 36 by the arm 37. The lower edge of this arm is provided with a downwardly extending pawl 38 which normally rests in a notch 39 on the cam 40 allowing the wick to drop clear of the strip when the plunger is in its raised position. This cam is fixed to and moves with the rock shaft 26. When the plunger is carried downward the wick is raised in contact with the strip and when the plunger is at its extreme downward stroke the pawl again drops off into notch 41 so that should the plunger be locked in its downward position the moistening wick will also then remain a short distance from the strip. As the plunger rises and the fingers 16 move forward to feed the stamp strip it will be seen that the cam 40 in returning to the position illustrated in Fig. 4 raises the wick into contact with the gummed surface of the strip to moisten the same as it is being fed forward.

In order to insure the complete severing of the stamps I have provided a cutter having a shearing action, see Fig. 5, the lower blade 42 being secured to the frame by means of screws 43. The upper blade 44 is pivoted at 45 to the lower blade and held normally in its open position by the tension of the coil spring 46. The upper edge of this blade 44 rests against the underside of the lip 47 of the plunger 11 so that each time the plunger descends the shear is actuated to sever a stamp from the strip.

In order to keep track of the number of stamps used I have provided a counter 48 which is actuated at each operation of the plunger from the shaft 26 through the arm 49, connection 50 and arm 51.

When it is desired to affix a stamp to an envelop the latter is placed upon the table 2, and brought forward until its edge rests against the edge of the frame and the gage 52 when it is only necessary to strike down the plunger and the stamp is affixed. When it is desired to apply a second stamp to the same envelop the screw 53 is loosened and the gage 52 is moved back to the line A when the plunger is again positioned and

the second stamp affixed. If it should be desired to affix a third stamp to the same envelop the gage is then moved back to the line B, the envelop positioned and the operation repeated.

The operation of my invention may be more fully described as follows: The stamps used in this machine are in a strip or ribbon form, the strip being perforated between the stamps and wound upon a reel. When it is desired to insert one of these reels into the machine, the cover 6 is swung back on its hinge 7 and a reel loosely mounted on the pin 54. The end of the ribbon is then led under the guide 55 and retaining spring fingers 64, over the horizontal table 30, under the severing blade 44, and drawn forward until the length of one stamp projects beyond the shears. Then upon presenting envelops successively to the machine a stamp may be affixed to each at every downward stroke of the plunger. Ordinarily in machines of this character where the stamps are fed forward on the upward stroke of the plunger, the last stamp already moistened and ready to be affixed extends out into position under the plunger, and if not affixed at once this stamp in drying is apt to curl up or wrinkle and its adhesiveness in a measure destroyed. To obviate this difficulty I have provided a retaining latch 56, see Figs. 2 and 8, constructed of slightly resilient material, the same being slotted at 57 to receive the screw 58. The end of the handle or button 59 is arranged to project through the latch plate forming a slight protuberance 60 which is adapted to enter corresponding depressions 61 and 62 in the face of the plate on which it rests to hold this latch either in its engaging or disengaging position. A notch 63 is formed in the side of the plunger 11 for the reception of this latch 56 so that this plunger may be locked in its downward position to prevent the stamp strip from being fed forward after the last envelop has been stamped thereby preventing the moistening and feeding forward of a stamp that will not be used at once. It will also be seen that at this time when the plunger is locked in its down position that the pawl 38 drops down into the notch 41 of the cam 40 removing the moistening wick from contact with the gummed surface of the stamp.

My improved stamp affixing machine is very small and compact and may be readily moved about, therefore in order to prevent the water in the tank 31 from being spilled upon the stamps, I have made the liquid receptacle water tight so that even though the machine should be handled carelessly or even roughly the water will not leak out and destroy the usefulness of the stamp roll.

An essential feature from a practical standpoint in the construction, arrangement

and operation of my stamp affixing machine is that the stamp strip lies in a horizontal position while being fed from the reel to the point where the stamps are affixed, by which arrangement I am enabled to so construct the casing as to be able to readily see the stamps and observe their condition while being fed from the roll, so that if any trouble occurs, such as sticking, doubling up, tearing, or otherwise injuring of the strip, which is very liable to occur owing to the rather delicate nature of the strip due to the perforations, etc., it can be located and remedied at once. In constructing this machine to accomplish this purpose I have placed the table, over which the strip is fed, in a horizontal position, I have moved the operating mechanism represented by the connecting levers 18, 27, 28 and 29 off to one side, as represented in Fig. 2, and have removed a portion of the casing and located above this table a plate of transparent material 5 through which the operator can obtain an unobstructed view and readily observe at all times the condition of the strip and the operation of the actuating mechanism, so that by quickly locating and remedying the trouble, much time and what otherwise might cause a considerable waste of stamps and money is saved.

I claim:

1. A stamp affixer having an actuating plunger, means actuated by said plunger to engage and feed a strip of stamps, a moistener, means actuated by the movement of said plunger for removing said moistener from contact with the gummed surface of said strip when said advancing means is at the end of its feeding stroke.

2. A stamp affixer having an actuating plunger, means actuated by said plunger to engage and feed a strip of stamps, a moistener, means actuated by the movement of said plunger for moving said moistener into contact with the gummed surface of the strip while the same is being advanced and to remove the same when the feeding mechanism is at the end of its advancing stroke.

3. A stamp affixer having an actuating plunger, means actuated by said plunger to engage and feed a strip of stamps, a moistener comprising a water-tight reservoir having a moistening wick, means actuated by the movement of said plunger for removing said wick from contact with the gummed surface of said strip when said advancing means is at the end of its feeding stroke.

4. A stamp affixer having an actuating plunger, means actuated by said plunger to engage and feed a strip of stamps, a moistener comprising a water-tight reservoir having a moistening wick, means actuated by the movement of said plunger for moving said wick into contact with the gummed surface of the strip while the same is being ad-

vanced and to remove the same when the feeding mechanism is at the end of its advancing stroke.

5 5. A stamp affixer having fingers to engage the perforations in a strip of stamps, means for moving said fingers forward in a direction to feed the strip, and then backward for another engagement, means for severing stamps successively from the strip and

affixing them to envelopes, and means in said 10 fingers for permitting them to be readily withdrawn from said perforations.

In testimony whereof I affix my signature in presence of two witnesses.

FRED R. ALLEN.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."